NORTHERN NEW MEXICO CITIZENS' ADVISORY BOARD

NEWSLETTER SUMMER 2004

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A BEGINNER'S TUTORIAL ON RADIOACTIVE WASTE

Let's face it, radioactive materials play key roles in our lives. Commercial nuclear power plants generate one-fifth of the electricity used by people living in the United States. Hospitals use special radioactive materials to diagnose and treat cancer and other diseases. Research in America's nuclear weapons program uses radioactive materials such as uranium and plutonium. Managing the waste from these activities is an environmental, technical, and political challenge. Large quantities of radioactive waste currently need treatment, disposal and storage.

The topic of waste management is complex to understand and even more difficult to implement effectively. Selecting sites and constructing and managing disposal facilities that must isolate radioactive waste for hundreds or even thousands of years are complicated and controversial processes. Safely transporting waste to storage and disposal sites involves extensive planning and precautions, including route selection, waste packaging, security considerations, carrier selection and training, and emergency response preparation.

Where does radiation come from?

Natural sources of radiation include cosmic rays from outer space, and may also be found in soil and rock, water (above and below ground) and even in our own bodies. These are referred to as background radiation. The largest single source of background radiation is indoor radon, which accounts for 55% of annual exposure. Radon is a radioactive gas that is colorless, odorless, tasteless and chemically inert. Radon results from the decay of uranium and uranium mill tailings that are a byproduct of mining uranium ore.

Manmade sources come from medical diagnosis and treatment, some consumer goods, nuclear power plants, past nuclear weapons manufacturing and fallout from nuclear weapons testing.

What is half-life?

The "half-life" of an unstable radionuclide or element is the amount of time it takes for half of the radioactive atoms in the element to decay to a more stable form. The half-life can vary substantially from one isotope to another; three minutes for polonium-218, 8 days for iodine-131, 24,000 years for plutonium-239, 77,000 years for thorium-230, to billions of years for uranium-238. Some radioactive materials decay to other radionuclides that give off additional ionizing radiation.

What is radioactive waste?

Radioactive waste is made up of radioactive materials that are no longer of any use; radioactively contaminated tools, equipment, clothing and construction debris; or the unused byproduct of using, refining and processing radioactive materials. Almost all research or use of radioactive materials generates some waste. The radioactive waste may be a liquid, solid, or gas and the radiation may come in the form of alpha particles, beta particles, gamma rays or x-rays.

Characterization of Radioactive Waste:

Low-Level Waste (LLW) is defined by what it is not. It is radioactive waste that is not high-level waste, not spent nuclear fuel, not transuranic waste (TRU) or by-product materials such as uranium mill tailings. Typical low-level radioactive waste consists of such things as gloves and other protective clothing, glass and plastic laboratory supplies, tools and equipment, sludge, used resins and residues, dirt, concrete, construction debris, and scrap metal. This waste is usually contaminated with very small amounts of radioactive isotopes with a short half-life dispersed in large quantities of materials, but in some cases LLW can be highly radioactive.

Transuranic Waste (TRU) is defined by law as "waste containing more that 100 nano-curies of alpha-emitting transuranic isotopes per gram of waste, with half-lives greater than 20 years. The actual waste consists primarily of protective clothing, tools, glassware, equipment, soils and sludges. Most of the TRU waste is a byproduct of nuclear weapons research,

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The NNMCAB would like to express its appreciation for the contributions of departing members: **Shannon Aragon**, **Don Jordan**; **Jim Johnston**, and **Wayne Wentworth**. ***Many thanks for their dedication and hard work!!***

Message from the Executive Director

Our quarterly newsletter was designed to keep you informed on environmental management at the Los Alamos National Laboratory (LANL). If you've never heard of the Northern New Mexico Citizens' Advisory Board (NNMCAB, or just CAB for short), then let me introduce the CAB to you.

Your CAB is a federally chartered advisory board to the Department of Energy. We advise the Los Alamos Site Office (LASO). We focus on the environmental remediation of the legacy waste and contamination at LANL. We exist to take the community's views and values to the decision-makers at LASO and LANL. Our intent is to improve their decision-making as they devise and execute plans to complete the remediation. The CAB also examines issues affecting waste management and environmental monitoring and surveillance at the lab. The CAB is really your CAB -- for it is your values and interests we try and bring to bear with the DOE and LANL. We also advise the New Mexico Environment Department (NMED), the U.S. Environmental Protection Agency (EPA), and other regulatory agencies with a stake in LANL's cleanup. We are always looking for volunteers to help us help everyone else. We have several committees reporting in this newsletter. You don't have to be a formal CAB member to serve on a committee, just show up, sign up, and take part.

If you're interested, call the CAB office. We will direct you to the next meeting that interests you. Please visit our web site (www.nnmcab.org) for details on your Northern New Mexico Citizens' Advisory Board. Come join us at our next bi-monthly CAB meeting, or any of the Committee meetings held each month.

Help us Keep New Mexico the Land of Enchantment!

Menice S. Manzanares, Executive Director

NNMCAB Welcomes New Members!

Raye Byford *(Santa Fe)*
Mr. Byford is a Deputy Chief in the Santa Fe Police Department, where he has been serving the community since 1987. His law enforcement experience has included working in the DWI and Patrol, Investigations and Traffic Units, and he has previously sat on the Traffic Calming Task Force and the Local Emergency Planning Committee.

J.D. Campbell *(Arroyo Seco)*
Dr. Campbell has been engaged in providing waste management services and geotechnical engineering worldwide for over 30 years. His expertise lies in assessing the performance and impact of existing facilities on the environment and developing appropriate and cost effective remedial programs. He also develops designs for new facilities to meet performance objectives and regulatory requirements.

Barbara Gonzales *(San Ildefonso Pueblo)*
Ms. Gonzales, a Native American potter and lecturer on the traditional Tewa lifestyle of northern New Mexico, holds a B.A. in Elementary Education from the College of Santa Fe. Her work appears in the permanent collections of the Smithsonian Institute in Washington, D.C., the Wheelwright Museum in Santa Fe, and others.

Jim Janis *(Cerrillos)*
Mr. Janis, an environmental engineer with more than 30 years of senior management in both the public and private sectors, has previously held director-level and executive positions at both the EPA and DOE, as well as ICF Kaiser International and British Nuclear Fuels. He is currently a partner in The Janis Group, a management consulting firm.

Grace Perez *(Santa Fe)*
Ms. Perez is the past Executive Director of the Mystic River Watershed Association in Massachusetts, and has also served on the Advisory Board of the Thoreau Country Conservation Alliance, a public-private collaboration to acquire and preserve the birthplace of Henry David Thoreau. Ms. Perez holds an MS in Resource Management.

Christopher M. Timm (*Albuquerque*)
Mr. Timm is the Vice President / Senior Project Manager for Pecos Management Services, Inc. He received his BS from Purdue University in Civil Engineering and his MS from the University of New Mexico in Environmental Engineering. He holds a Professional Civil Engineer's license in Colorado and New Mexico. Mr. Timm has considerable knowledge of federal environmental programs, including DOE and EPA, stemming from over 25 years of experience.

NNMCAB STAFF:

Menice S. Manzanares, Executive Director
Lorelei Novak, Community Outreach Specialist
Grace Roybal, Administrative Assistant
Eddie Roybal, Sound Technician

Tutorial on Radioactive Waste

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development, production and subsequent cleanup. Because of the long half-lives of some transuranic elements, TRU waste requires the same long-term isolation as spent nuclear fuel and high-level waste.

High-Level Waste (HLW) is spent (irradiated) nuclear fuel that comes from commercial nuclear power reactors, defense activities or waste resulting from solvent extraction systems in reactor fuel reprocessing facilities. HLW contains enriched uranium and other radioactive elements and is thermally hot and highly radioactive.

Uranium Mill Tailings are earthen residues, usually in the form of fine sand that remain after mining and processing uranium ore. They typically contain low concentrations of naturally occurring radioactive materials (NORM), such as thorium-232 and radium-226, which decays to emit the radioactive gas radon-222.

What is mixed waste?

Mixed waste contains both radioactive and chemically hazardous constituents. The Resource Conservation and Recovery Act (RCRA) defines hazardous waste as any thing that is flammable, corrosive, reactive, or toxic. Mixed waste comes from a variety of activities including equipment maintenance, facility deactivation and decommissioning and materials production. For example, the use of Zylene as a cleaning solvent in a radioactive environment can create a residual solvent that is now both hazardous and radioactive.

What are contaminated environmental media?

Contaminated environmental media are naturally occurring materials such as soil, sediment, and surface water and groundwater that have been contaminated by radioactive isotopes or non-radioactive chemicals. For example: when a storage container leaks or is punctured the environment surrounding the leak absorbs the radioactive substance and now becomes contaminated as well.

How much volume of Legacy Waste needs to be managed?

A January 2002 Department of Energy (DOE) publication estimates there are 8,500,000 cubic meters of legacy waste to contend with **(enough to fill the playing area of a football field 1.2 miles high or 40,826,345 standard 55 gallon drums of radioactive waste),** plus the new waste produced every year. The Los Alamos site alone generates 2,850 cubic meters of radioactive waste annually.

What happens to it?

The waste material gets characterized, packaged or repackaged, safely stored (SAFSTOR) and if it's transuranic waste it is transported to a long-term repository like the Waste Isolation Pilot Plant (WIPP) near Carlsbad, New Mexico.

The Nuclear Regulatory Commission (NRC) requires that radioactive waste be packaged in containers designed to be the primary barrier to an accidental release during shipment or storage.

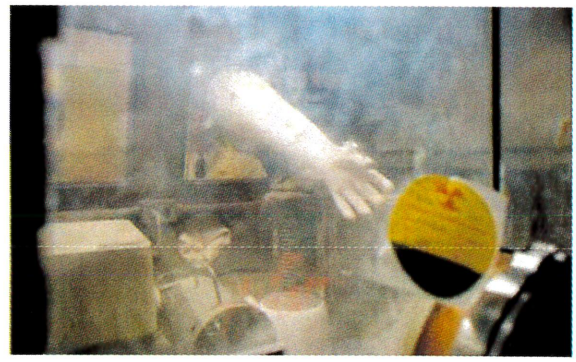
The NRC and the Environmental Protection Agency (EPA) have developed regulations stipulating minimum site suitability criteria for hazardous waste storage and disposal facilities which include requirements related to population density, surface and groundwater conditions, soil types and climate. HLW and some LLW at this time are often stored at the site where the waste was generated in special containers, rooms or buildings. Requirements vary depending on the level of hazard. Some storage facilities require shielding with lead, concrete, or other materials. The NRC requires that radioactive waste is stored in a manner that maintains acceptable levels of radiation doses to workers and to the public. Some LLW can be stored onsite until it decays to a safe level and may be disposed of with non-radioactive waste. Transuranic (TRU) waste is currently moved between several DOE locations in the United States.

The DOE sponsored the development of safe, efficient, licensable, and cost-effective transportation systems to handle radioactive waste. One system used for transporting contact-handled TRU waste is named TRUPACT, which stands for Transuranic Package Transporter. TRUPACTs must provide structural and thermal protection to the waste when exposed to normal transport and hypothetical accident scenarios specified in Federal regulations.

How is it transported?

Transportation of nuclear waste is of particular concern for states and tribes along the main transportation routes to the disposal sites, for example the road to WIPP near Carlsbad and potentially to Yucca Mountain in Nevada.

The DOE and the Department of Transportation (DOT) as well as compacts (or interstate agreements) formed by states along the transport routes ensure that the subcontractors hired by DOE meet and adhere to a *(cont.)*



Tutorial on Radioactive Waste

(continued from page 1)

rigorous certification checklist. The companies contracted to facilitate the transport of radioactive waste must comply (or face punitive charges) with the DOE's regulatory standards. The licensing program for companies includes materials handling and safety training as well as emergency response training.

How are these processes regulated?

Rigid safety controls have been set forth by the NRC to handle radioactive waste. Under the Hazardous and Solid Waste Amendments of 1984 the DOE is required to eliminate contaminate releases at or from its facilities according to a schedule specified by the EPA. The Federal Facilities Compliance Act requires DOE comply with EPA regulations. The regulatory process is an intricate checks and balances system between state and federal agencies. The goal of the regulatory process is in essence to monitor radioactive waste production and to regulate its treatment, storage and disposal (TSD) to maintain approved safety standards. The National Environmental Policy Act also mandates that all federal agencies take into consideration the impact that their actions have on the environment.

Federal law provides for Oversight Bureaus and independent Citizens Advisory Boards that offer a voice for the scientist and concerned citizen. These organizations offer opinions and make formal recommendations to the Federal Government regarding policy decisions that ultimately affect us all for generations to come . . .

Sources:

"A Primer on Ionizing Radiation and Health Effects for the Intelligent Lay Person Who Wants to Understand the Technical Jargon of Nuclear Energy", by George Chandler

"A Guide to the US Department of Energy's Low Level Waste", Produced by the National Safety Council

"The Nuclear Waste Primer- A Handbook for Citizens", Produced by the League of Women's Voters

~ NNMCAB Committee Comments ~

Community Involvement Committee

Abad Sandoval, Committee Member

We now have a Speaker's Bureau program to give presentations to and receive feedback from city/county governments, church groups, civic organizations, educational institutions, and other community groups.

The Community Involvement (CIC) Committee is applying the International Association for Public Participation (IAP2) process to implement our public involvement plan. Public Participation is a process that involves the public in problem-solving or decision-making and uses their input to make decisions.

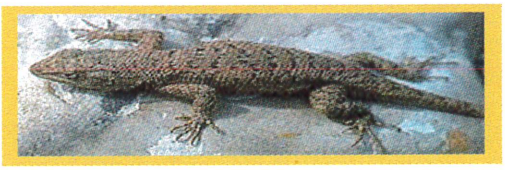
Why do Public Participation? Good Public Participation facilitates understanding – that is, both the public and the decision-maker need to fully understand both the scope of decision and the available options if an acceptable solution is to be found.

Effective Public Participation:

- Emphasizes a clear definition of the scope of the decision
- Creates a forum for sharing ideas and concerns
- Necessitates the development of clear, understandable information
- Requires a clear decision process and clear decision criteria
- Brings stakeholders together to focus on the scope of appropriate aspects of the decision and finds common ground
- Brings the public's issues (fears, concerns, needs, and desires) into the decision process
- Encourages a clear, understandable rationale for the decision

The Community Involvement Committee mission is to facilitate meaningful opportunities for collaborative information exchange and dialogue among the diverse multicultural communities of northern New Mexico in order to improve the quality of the decision-making processes of DOE and LANL. Through our efforts we hope to expand our public involvement to the citizens of the eight regional counties (Santa Fe, Rio Arriba, Taos, San Miguel, Mora, Sandoval, Bernalillo, and Los Alamos).

We now have a Speaker's Bureau program that is available to city/county governments, church groups, civic organizations, educational institutions, and community groups in the counties mentioned. The main component of this program is to provide an overview of the Northern New Mexico Citizens' Advisory Board and encourage further dialog of mutual interests. Upon special request, we can also provide speakers that can directly address the Los Alamos National Laboratory and the U.S. Department of Energy's current and ongoing environmental monitoring, surveillance and remediation activities, as well as waste management issues from a citizens' perspective.



~ NNMCAB COMMITTEE COMMENTS ~

Environmental Monitoring, Surveillance & Remediation Committee
Tim DeLong, Committee Chair

The legacy waste issues at Hanford are monumental. Millions of gallons of highly radioactive liquid waste were dumped in open pits…

The Environmental Monitoring and Surveillance (EMS) Committee and the Environmental Remediation Committee recently combined to form the EMS&R Committee. It had become evident that the missions of the two committees were similar, and that the two subjects are closely linked.

The members of this new joint Committee have been fully engaged in gathering information, attending LANL and DOE public meetings, and requesting and receiving briefings on monitoring, surveillance and remediation programs for legacy waste at LANL.

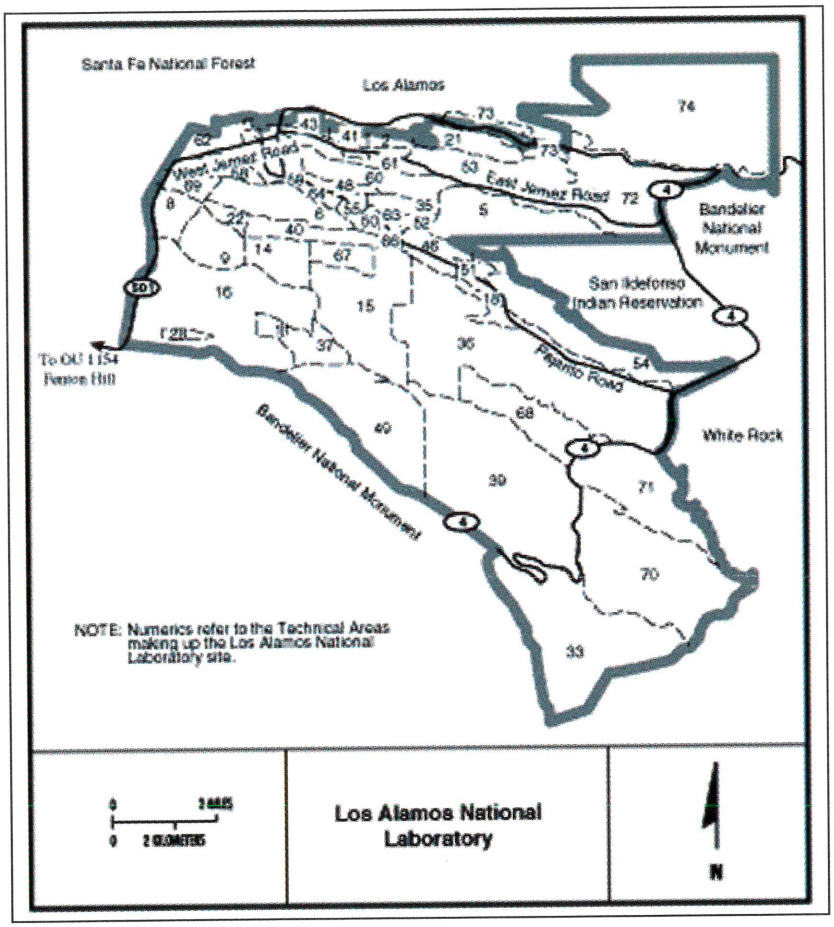
Some of the activities the committee and its members have been involved in are as follows:

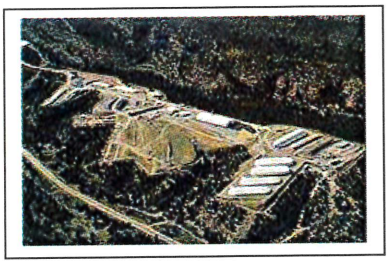
1. Attended and participated in the DOE Risk-Based End States public meeting.
2. Attended the Quarterly Groundwater meetings and poster sessions
3. Three EMS&R committee members attended the Hanford Advisory Board (HAB) meetings in February. The HAB is a DOE Site Specific Advisory Board similar to the NNMCAB for the Hanford DOE site near Richland, Washington. We learned that the legacy waste issues at Hanford are monumental. Millions of gallons of highly radioactive liquid waste were dumped in open pits, pumped into injection wells, and leaked from storage tanks. The primary mission of Hanford is now environmental cleanup, so the HAB is an essential part of the process. We were impressed with the cooperation between the regulators (the Washington Department of Ecology and the EPA), the DOE (the Richland Area Office and the Office of River Protection), and the HAB itself.
4. The Committee received a presentation from the LANL RRES-MAQ (Meteorology and Air Quality) Group about air monitoring on and around LANL. A series of Direct Penetrating Radiation monitors (the DPRNET) is stationed in many locations to measure ionizing radiation from sources in use at LANL. Also, an air sampling network (the AIRNET program) is a network of air monitoring stations in Los Alamos, Santa Fe, and Rio Arriba counties. Both of these monitoring programs are used to establish and evaluate risk to the public. The results of these monitoring programs and equipment is located on a website, available to the public at www.airquality.lanl.gov.
5. The Committee received a presentation on the TA-16, Building 260 Outfall Characterization and Cleanup Activities. This building was used for many years to machine and manufacture High Explosives (HE). HE waste was discharged through a sump and drain line into the Cañon de Valle. Soil, springs, surface, and alluvial waters are contaminated with HE. LANL has characterized the waste, and completed some interim cleanup of highly contaminated soil. Wells have been drilled and monitored to help identify the hydrology of the area and the extent of the groundwater contamination. LANL has submitted these results, and proposed cleanup measures and methods to the New Mexico Environment Department. These options are being evaluated. The NNMCAB will continue to monitor and evaluate cleanup activities associated with the 260 Outfall.
6. The Committee received a briefing on the "Demonstration of a Multi-Layered Permeable Reactive Barrier in Mortandad Canyon." This Permeable Reactive Barrier (PRB) is designed to remove contamination from alluvial groundwater flowing several feet below the surface of the ground in the canyon. Construction has been completed, and monitoring of the effectiveness of the barrier is ongoing. The PRB is designed to remove radionuclides, nitrates and perchlorate from water by adsorptive and biochemical processes. The barrier has been successful in reducing levels of these contaminants in water trapped in the barrier system, but the drought has reduced the flow so reduced levels downstream have not been established. It is anticipated that the spring thaw may increase water flow so that downstream reductions in contaminants can be verified. This demonstration barrier may have additional applications in other canyons contaminated by LANL legacy activities.
7. Finally, the Committee received a briefing about perchlorate detected in the Mortandad Canyon regional aquifer. Perchlorate is used as an energetics booster or oxidant in solid propellant for rockets and missiles.

The Committee will continue to inquire about, and comment on, monitoring, surveillance, and remediation activities that would interest the public. You are invited to attend any of our committee meetings. Meeting information is located on the NNMCAB website at www.NNMCAB.org, or by contacting the NNMCAB office. We look forward to seeing you at a meeting or hearing from you.

BE INVOLVED, BE INFORMED, MAKE A DIFFERENCE!

Waste Management Committee
James Brannon, Committee Chair





[2] *Arial View: Los Alamos Technical Area 54*

The Los Alamos National Laboratory (LANL): Proposal to Expand Area G

"The spring of 2000 was hot and dry in the West, and fires were burning throughout the area. The largest fire in New Mexico's history, labeled the Cerro Grande Fire, burned in northern New Mexico in the Jemez Mountains immediately west of Los Alamos and the Los Alamos National Laboratory (LANL). The fire burned approximately 43,000 acres of forest."[1]

The ramifications of the Cerro Grande Fire were far reaching and stirred up a complicated mix of hazardous waste combined with a substantial amount of contaminated environmental media that LANL now has to deal with in addition to its current annual production of waste as well as the volume of legacy waste already at the Los Alamos facility. Still, the result of the Cerra Grande Fire left Los Alamos with a tremendous bulk of Low Level Waste (LLW) that has strained the already bulging LANL storage facility and prompted a proposed plan to expand Area G in Zone 4. According to a LANL representative, NEPA documentation has determined and approved Zone 4 (North and South) to be the best location for the proposed expansion.

Area G Background:

Area G is in LANL's Technical Area 54; it's one of the Lab's low-level radioactive waste disposal sites. Located on the Mesita del Buey along Pajarito Road, Area G is about eight miles southeast of Los Alamos, but only one mile

(continued)

northwest of White Rock. In operation since 1957, Area G has 32 pits (typically 600 feet long and 30 feet deep,) 194 shafts, and 4 trenches containing disposed waste of various classifications from Low Level Waste (LLW) to transuranic (TRU) waste. The site has been in continuous use since 1957, and has received over 10.7 million cubic feet of radioactive waste. Area G began as a five-acre site and is now approximately 65 acres.

Area G Now:

Currently, just one pit remains active for waste disposal. The proposed expansion plan calls for digging three more pits. These pits would measure approximately 50 or 60 feet in depth. LANL's current disposal strategy calls for an active passive barrier and a "cap" of ten-foot deep compacted clay to "seal" the new pits. If the current strategy is approved, the total depth from the cap to the bottom of the pits will measure approximately 80 feet. LANL plans to use unlined pits to store the waste but the consensus of the NNMCAB Waste Management Committee was to disagree with LANL and request a risk assessment on the subject. LANL officials insist that with the current pit design in use there would be no significant migration. A proposed risk assessment should verify the validity and feasibility of storing radioactive waste in unlined pits and explore the venting issue of a possible vapor plume. LANL representatives have agreed to monitor and pull samples from waste storage containers to be used in a proposed risk assessment study.

LANL officials suggest that by employing an aggressive waste minimization program the proposed expansion should increase Area G's service life by approximately 50 years. Area G is currently slated for closure in 2015 but the deadline may be extended if the expansion proposal is approved.

When the LANL site does close, the WIPP will become a critical part in LANL's future Waste Management and Environmental Restoration programs. Forty-eight shipments of TRU waste have already been processed to WIPP from Los Alamos. The "Quick to WIPP" initiative, however, was halted recently by 'human calculation errors' for two of the shipments slated for WIPP. This caused Los Alamos to be audited and go through a re-certification process. With their lessons learned, LANL has implemented a new tracking system for waste transport and has developed a refined management strategy. Although transporting hazardous waste materials offsite is a very expensive, if not a prohibitive process, getting back on schedule with the "Quick to WIPP" initiative may ease the load for the proposed expansion plans of Area G.

The Waste Management Committee realizes the long-lasting effects that this proposed expansion plan, if approved, will have on Los Alamos and the surrounding communities. To appropriately weigh the impact of this proposal, on a community that is already burdened with a 'legacy of waste', *careful consideration* must be given to all the ramifications of the proposal, and that's what the Waste Management Committee is committed to doing.

References:

1. "Los Alamos, New Mexico, USA," by Marcia A. Jones, Stephen G. McLin, Mark E. Van Eckhout, and Douglas E. Walther, http://www.esri.com at http://www.esri.com/mapmuseum/mapbook_gallery/volume18/environmental3.html..

2. Los Alamos Site Graphics Courtesy of DOE, http://www.doe.gov.

Excerpt from Mr. Ed Wilmot's Comments at the May 22nd CAB Meeting and Retreat --

" . . . I personally have a strong commitment towards boards such as (NNMCAB). We had an extraordinarily successful one at Savannah River, which was very, very helpful and helped us in our decision-making and was very influential within the community. So the only thing I'm going to push for a lot, and very hard for, is to make sure that (CABs) can show meaningful contributions . . .
. . . it's important in this world of tight budgets to show value added . . ."

--Manager, Los Alamos Site Office

Inner Feelings

Barbara Gonzales, ***San Ildefonso Pueblo-Tewa Tribal Member***

Native American mothers are stout defenders of Mother Earth. It is with this instilled sense of "protector" that I chose to become a member of the CAB.

As I have matured and gained experiences from my life, my perspective on Mother Nature's view of man's notions about our role as Nature's benefactors and caretakers has not changed. We are still "gatherers" and "takers." This more so now then ever before. Not only have we multiplied and settled in regions not long ago called uninhabitable by human standards, we now can make it a livable place just because we can.

Mother Nature from my Native American Indian viewpoint is constant yet evolving. Constant because we take our resources such as water, air, plant life, soil and sunlight for granted. In my Tewa point of understanding, all elemental existence influences each other. On the skim of life, we are just a dot on the "domino" game of life. We cannot undo history as transpired and written by man. Nor can we transpose the effects. But we can correct and improve our progression with time. We can better the conditions of our habitat, our environment, and how we manage our resources.

The most precious of our human resource that we give to Mother Earth are our children. Like Mother Nature's nourishment of water, a human mother nourishes her child first in her womb, then at birth with her own lactate. To a Native American mother who gives birth to a "hunter," which can be a male or female, Mother Nature through Mother Earth will be the "game" provider for food.

In the area of the Pajarito Plateau we have wild turkey, deer and elk which are plentiful most times but elusive. Even for an experienced and skilled hunter a harvest might be meager. Modern convenience sometimes hinders the hunter. Sometimes airplanes are flying low and "spook" the game. There are autos on the roads causing hazardous conditions for wild animals seeking a waterhole. Thirst is all-consuming for animals.

As a game hunter, a Native American mother instills in her child, upon harvest of wildlife, to share the abundance! Pummeled dry meat is used in stews all year round. Just like jerky meat, it can be a meal in itself or a snack. Nature provides us with our meat like days of old.

Mother Earth produces wild grass and plant life for animals in the wild. She also provides healing plants for us to use. Wild tea can be made into a drink and as a healing source for stomach ailments. All plant longevity depends on soil conditions, water and sunlight to flourish and nourish.

Fire devastation, whether caused by lightening or by man, like the destruction of the Cerro Grande Fire, has shifted the "green belt" on the higher Pajarito Plateau. We can help Mother Earth and Mother Nature to replenish the devastated area. It will

come back. Native American mothers are stout defenders of Mother Earth. It is with this instilled sense of "protector" that I chose to become a member of the Northern New Mexico Citizens' Advisory Board.

The contamination of resources in, on and across the "Tsekumo Pin" (Chacoma Peak Range - Western direction) and beyond to "Pin So-ong" (Taos Mountain Range - Northern direction), to "Ku-sang Pin" (Sangre De Cristo Mountain Range - Eastern direction), and to the "Sundee-a Pin" (Sandia Mountain Range - Southern direction) is of critical importance. These lands must be protected and the surrounding lands maintained for future generations.

If we become insensitive to our scientific endeavors, the monsters within the contaminates will be the "flies" on our backs! Just how much elimination from "fly swatters" can we handle?

And now guess what? We have reached a time in history where the sons and daughters, grandchildren and great-grandchildren of the generations of "Maids" and "Janitors" who once cleaned the houses and primitive laboratories of the "Atomic Age" are now educated and armed with inquisitive minds to question why and how this stumbling block of "fly brain numbness" has affected our "backs"! We need to "backpack" our tools to understand, to learn, to want to be an informed people, to lend support and to give encouragement, to make right, sensible, correct choices for the future children. The knowledge and technology are within our reach.

We, the Pueblo People of New Mexico, are a stable entity. We are culturally and traditionally reared with an ingrained, inborn, instilled sense of pride. We are not "mobile" like the rest of society. We are bound by our "reservations" but we have the key to our inbound tribal gates.

In the context of the "We" there is an "I." I not only want to serve but to be a catalyst for safe improvement. The transportation of nuclear waste and storage on the Pajarito Plateau (Los Alamos Technical Areas) affects us all. All of Los Alamos is on our San Ildefonso Pueblo ancestral homeland. Our roots are here! Our ancestors are embodied in our genetics codes! My people, the Tewa Tribes, whose lands border the laboratories and facilities, are immediately affected by scientific and environmental decisions. They impact our present and our future existence.

I am just one heart beating with a single voice.

Recent NNMCAB Recommendations to D.O.E.

"I particularly commend the Board for your work in 2003 by closely tracking and evaluating the Long Term Environmental Stewardship, Public Involvement, Transuranic Waste Management, and Groundwater Protection Programs at Los Alamos National Laboratory. I encourage your continued presence, as you best represent those impacted by the Department's activities, and I look forward to interacting with you in the future."
Edwin L. Wilmot
Manager
Los Alamos Site Office

Recommendation #2003-5
"LC/MS/MS Evaluation Method for Perchlorate"
A new method to detect perchlorate in water, called Liquid Chromatography / Mass Spectrometry / Mass Spectrometry (LC/MS/MS) is being evaluated by LANL, NMED and DOE, and provides greater detection and a higher level of confidence than earlier detection methods. The NNMCAB recommended the continued development of LC/MS/MS and asked that a plan be developed and publicized detailing any further requirements for its acceptance by the EPA. NNMCAB also recommended that LANL document and publicize its method evaluation study plan, as well as detailed results from the commercial lab evaluations.

Recommendation #2003-6
"Consequences of the NM Environment Dept. Order"
During negotiations regarding the NMED's Corrective Action Order, essential NMED personnel and resources were diverted from regulatory functions, and the DOE withheld funds from LANL's cleanup programs and waste management operations pending resolution of the negotiations. The NNMCAB strongly recommended that the withheld funds be released to allow certain cleanup programs to continue, and that NMED allow personnel to resume regulatory functions and address a backlog of work. The NNMCAB specifically requested that funds for processing and shipping of transuranic waste be release immediately, since those programs are not covered under the Corrective Action Order.

Recommendation #2003-8
"Unreasonable Time Constraints for DOE Directives"
As part of DOE's recent policy to develop Risk-Based End States nationwide, LANL was directed on September 29, 2003, to prepare comprehensive, complicated "vision documents" with a first draft due on October 31, and the final due January 30, 2004. The NNMCAB's multi-part recommendation sought to extend the deadline to allow sufficient time for credible public input, and to lessen the haste with which the documents are prepared. Additionally, NNMCAB wished to see that DOE prepare and publish a Public Involvement Plan consistent with its stated commitment to public participation in decision-making.

Recommendation #2004-1
"Reinstate High Performance (Core) Teams"
In past years, teams of representatives from LANL, DOE and NMED got together to streamline the development of solutions and more quickly reach agreements satisfactory to all sides when developing corrective measures for LANL sites. The current system does not utilize such teams, and generates delays and misunderstandings. The NNMCAB recommended that these High Performance Teams be reinstated, and that the members be empowered by their organizations to make decisions regarding technical aspects of issues being considered.

Recommendation #2004-2
"Community Involvement in Work Plans for Area G and L"
The Board has reviewed several proposed activities of the RRES Division, including the Investigation Work Plans for Areas G and L (dated July 2003 and September. 2003, respectively) and finds that they lack a public participation component.
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~SITE SPECIFIC ADVISORY BOARDS~

What Are Site-Specific Advisory Boards?

Site-specific Advisory Boards were developed to involve stakeholders more directly in DOE cleanup decisions. While only one Federal Advisory Committee Act-chartered Environmental Management Site-Specific Advisory Board (EM SSAB) exists, 9 local site Boards chartered under the EM SSAB umbrella charter have been organized at the following DOE sites: Fernald, Hanford, Idaho, Los Alamos, Nevada, Oak Ridge, Paducah, Rocky Flats, and Savannah River.

Where Are The Local Site Boards?

As the map below indicates, local Site Advisory Boards have been established in the states of Washington, Colorado, Idaho, Nevada, New Mexico, Kentucky, Tennessee, Georgia and Ohio.

WHAT WE EXPECT, THE SSAB'S OWN WORDS:

We expect DOE and state and federal regulators will support and encourage effective public involvement in cleanup, environmental restoration, closure, stewardship, future use, nuclear material disposition, and hazardous and nuclear waste management decisions. DOE will seek and consider advice from the public and Tribes and provide opportunities for their involvement; locally and regionally, when the decision affects one site, and nationally, when the decision affects more than one site.

We expect DOE to ensure candid disclosure of timely, understandable, and relevant information to enable the SSABs to make informed recommendations and advice.

We expect DOE and the regulators will continue to value the importance and benefit of continued public involvement, will respond substantively and promptly, and will give utmost consideration to environmental justice in their decision making. We expect DOE will honor Tribal treaties and conduct government-to-government consultation.

We expect DOE will request funding adequate to meet or exceed legal requirements, reduce current and future risks, and in accord with values and needs of local communities. We expect that DOE will protect the public, workers and the environment.

DOE's obligations to the local site boards include:

Keeping the boards informed about key issues and upcoming decisions.
Requesting recommendations well in advance of DOE deadlines.
Considering and responding in a timely manner to all Board recommendations.
Providing adequate funding for administrative and technical support.

How Are The Local Site Boards Evaluated?

DOE's Office of Environmental Management periodically conducts an independent evaluation of the local site Boards. This evaluation may consist of a formal survey of selected individuals, including Board members, ex-officio members, members of the general public; site visits and discussions with SSAB members and others; and/or a review of recommendations, reports, and meeting minutes submitted by local site Boards. In addition, at the end of each fiscal year, local site Boards are requested to conduct self-evaluations of progress made during the previous year.

Are They Working?

Since 1994, the local site Boards have met numerous times, providing DOE with hundreds of recommendations. Many of these recommendations have proven highly effective in redirecting EM efforts in ways that have saved taxpayers hundreds of millions of dollars.

At ***Hanford***, the local site Board recommended that the DOE reduce indirect and overhead costs, saving more than $200 million. Additionally, the Board recommended against DOE building six new double-shelled tanks. As a result, the Energy Department avoided approximately $375 million in unnecessary costs.

At the ***Idaho National Engineering & Environmental Laboratory***, the Board recommended that DOE use the most efficient and cost-effective method available for remediating ground water contaminated with hazardous chemicals — resulting in a savings of more than $6.5 million.

At ***Savannah River***, the SRS Citizens Advisory Board (SRS CAB) has assisted in accelerating the closure of the Old Radioactive Waste Burial Ground (ORWBG), the highest risk site in the Savannah River Site's (SRS) Environmental Restoration Program. With the CAB's input and recommendations, SRS has proposed a final remedy for this waste unit that combines remedies from three nearby radioactive waste basins with the closure of the ORWBG.

At ***Paducah***, waste disposition has been one of the Citizens Advisory Board's primary focuses. The CAB has performed in-depth studies on a potential on-site disposal facility, ultimately aiding in the selection of its future location. The CAB continues to stay abreast of the Remedial Investigation/Feasibility study and currently is focused on the on-site sanitary landfill and a myriad of regulatory issues. It is also preparing comments on actions resulting from the Accelerated Cleanup Plan.

At ***Oak Ridge***, the Oak Ridge Site-Specific Advisory Board (ORSSAB) submitted its Comprehensive Closure Proposal identifying two projects for accelerated closure. Its proposed disposition of low-level radioactive waste will produce an $8 - $9 million savings. In another project, two high school classes wrote summaries of the Oak Ridge Reservation Stakeholders Reports on Stewardship as a way to educate other students about stewardship with a set of "student friendly" documents.

Source: DOE, Office of Environmental management and Public Accountability, **http://www.em.doe.gov.**

Northern New Mexico Citizens' Advisory Board
Department of Energy Site Specific Advisory Board
to Los Alamos National Laboratory

Is Currently Recruiting New Members to Serve
a Two Year Appointment by the Secretary of the Department of Energy

What Is the Northern New Mexico Citizens' Advisory Board?

Site-Specific Advisory Boards were developed to involve stakeholders more directly in Department of Energy (DOE) cleanup decisions. The Northern New Mexico Citizens' Advisory Board provides the Department of Energy with policy information, advice, and recommendations concerning environmental restoration, waste management, monitoring and surveillance and technology development activities.

Who Serves on the NNMCAB?

Board membership reflects a full diversity of views, cultures, and demographics from affected communities and regions. Members include stakeholders from local governments, Tribal Nations, environmental and civic groups, labor organizations, universities, industry and other interested parties. DOE, the Environmental Protection Agency and the New Mexico Environment Department serve as ex-officio members.

What are the Board Member Responsibilities?

- **Submitting advice and recommendations to DOE on key Environmental Management issues.**
- **Representing and communicating the diversity of community views in their discussions.**
- **Keeping the public informed on key issues, upcoming decisions, and Board recommendations.**
- **Preparing for and attending Bi-monthly Board Meetings and serving on at least one Committee of the Board.**

UPCOMING NNMCAB MEETINGS:

FULL BOARD MEETING
SEPTEMBER 29, 2004
CITIES OF GOLD HOTEL
POJOAQUE, NEW MEXICO

PUBLIC IS INVITED TO ATTEND!
CALL THE CAB FOR INFORMATION!

How Can You Get Involved?

NNMCAB Board Meetings serve as a two-way exchange between members of the public, the NNMCAB, the DOE, and the regulatory agencies. They always include a public comment and question and answer period through which you can voice your issues or submit written questions. DOE responds to the comments and considers them during decision making.

Interested in Becoming a Board or Committee Member?

Please call Menice S. Manzanares, Executive Director at (505) 995-0393 or email her at: mmanzanares@doeal.gov or come by our office at 1660 Old Pecos Trail, Suite B, in Santa Fe.

CLIP THIS SECTION TO CONTACT THE NNMCAB BY MAIL

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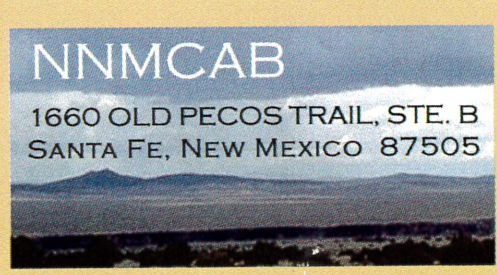

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